

WIDE-RANGE AND HIGH-RESOLUTION VARIABLE OPTICAL DELAY

ABSTRACT

Variable optical delay (VOD) systems are provided that include optical switching techniques, and optical manifold techniques, and/or index switching techniques. In certain embodiments, liquid crystal cells are used to impart fine delay in a VOD system. Medium delay may be provided with index switching systems. Course delay may be

5 provided with total-internal-reflection or polarization based optical manifold systems, or micro-fluidic based optical manifold systems. These fine, medium and course delays may be integrated in a single VOD system to provide a wide range and high resolution delay.